

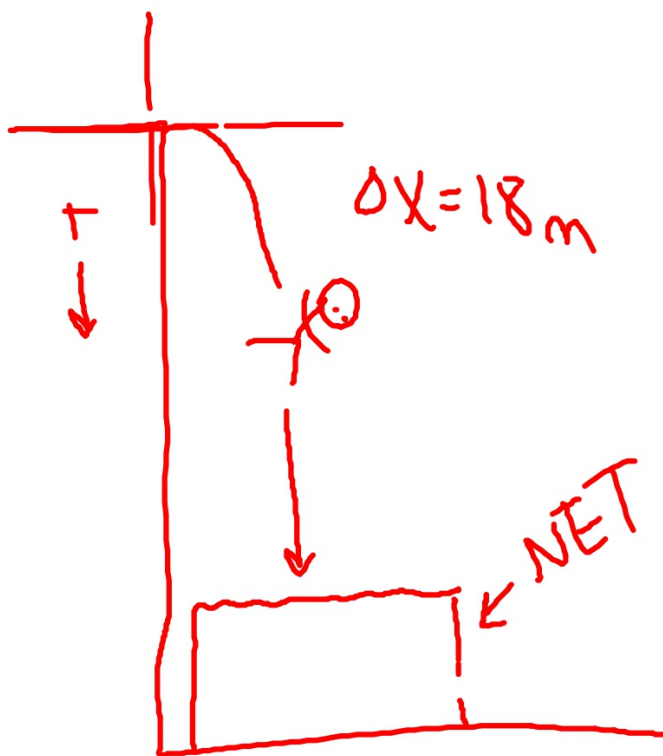
$$\Delta x = \frac{1}{2}(9.8)(1.49)^2 = \boxed{10.87 \text{ m}}$$

$$\Delta x = v_0 t + \frac{1}{2} g t^2$$

$$14 = 4.9 t^2$$

$$\sqrt{\frac{14}{4.9}} = t^2 = 2.8 \text{ sec}$$

$$t = 1.69 - 2 = \boxed{1.49 \text{ s}}$$

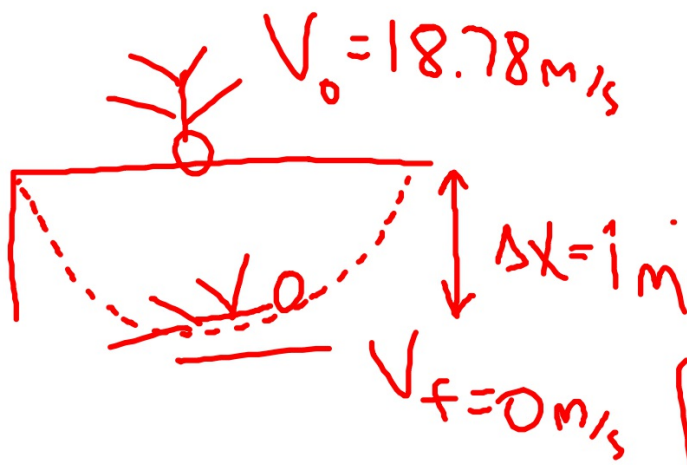


$$V_f^2 = V_0^2 + 2a\Delta x$$

$$V_f = \sqrt{2(9.8)(18)}$$

$$V_f = 18.78\text{m/s}$$

USE FOR  $V_0$



$$2a\Delta x = v_f^2 - v_0^2$$

$$a = \frac{-(18.78)^2}{2(1\text{m})}$$

$$a = -176 \text{ m/s}^2$$

